

b) a second layer composed of an extruded solid polymer film material having a water vapor transmission rate measured at 90 percent humidity, 100 degrees-Fahrenheit, g/100 in²/24 hours of less than 0.5; and

c) an adhesive layer between the first and second layers,

wherein the first and second layers are integrally bonded together by the adhesive layer continuously, such that there are about less than three air pockets in ten square feet of the wrap material, and wherein the wrap material has a characteristic of paper in that it can retain a crease.

Sub
B2 F1
5. (Twice amended.) The composite wrap material according to Claim 1, wherein the first layer is composed of a material selected from the group consisting of machine finished paper, machine glazed paper, tissue, air laid fabric, wet laid fabric, creped tissue, and a metallized paper.

B3 Sub F1
12. (Once Amended) The composite wrap material according to Claim 1, wherein a surface of the first or second layer is composed of a metallized material.

B4
15. (Once Amended) A ream of paper wrapped together as a package with a sheet of the composite wrap material of Claim 1, wherein the composite wrap provides a higher burst strength than papers without the second layer of extruded solid polymer film and the adhesive layer.

18. (Once Amended) A composite wrap material for use in wrapping reams of paper, the wrap material consisting of:

a first layer composed of paper; and

a second layer composed of an extruded polymer film material in solid form;

wherein the first and second layers are integrally bonded together by an adhesive, and the polymer film layer, either alone or in combination with the adhesive, provides a moisture vapor barrier.

20. (Once Amended) The ream of paper according to Claim 19, wherein the composite wrap material provides a barrier to effectively prevent moisture absorption and curling of the packaged paper.

21. (Once Amended) The ream of paper according to Claim 19, wherein the composite wrap material has a characteristic of paper in that it can retain a crease.

REMARKS

The Examiner has rejected all of the pending claims, claims 1, 5, 6, 8-12, 15, 16 and 18-21. Of the pending claims, claims 1 and 18 are independent.

Objections

The Examiner has objected to claims 5 and 12 due to informalities. These claims have been corrected.

Claim Rejections – 35 USC § 112

The Examiner has rejected claims 1, 5, 6, 8-12 and 15-16 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. First, the “burst strength” has been further defined in claims 1 and 15 respectively, to reflect what a person of ordinary skill in the art would understand the terms to mean. Applicant’s patent application states that “[c]onventional commercial wrappers include paper\polyethylene\paper laminates, paper\wax\paper laminates, polyethylene-coated papers, wax-coated papers, and transparent polymer films. A drawback of paper-based wrap materials is their low burst strength. Oftentimes, such packages tend to break open before reaching the consumer because the wrapper is not strong enough to hold the paper upon repeated handling and stacking on store shelves.” Further support for the amendment is found in ¶¶ 7,8 of the Declaration of Van Abel, and ¶¶ 9,10 of the Declaration of Mueller, enclosed herewith. Second, the term “fold characteristics” has been deleted from claims 1 and 21, and replaced with wording as suggested by the Examiner, and relates to the ability to maintain a crease. Support for this amendment is found at page 5, lines 8-9 of applicant’s specification, and in the Declaration of Van Abel, ¶ 6 and the Declaration of Mueller, ¶ 8. Third, the phrase “substantially no air pockets” can be generally defined as about less than three air pockets of about 1 mm or less in 10 square feet of material. See, the Declaration of Van Abel, ¶ 5 and the Declaration of Mueller, ¶ 7.

The enclosed Declarations do not present new matter, but merely state supporting facts that are in accordance with common knowledge among those of ordinary skill in the art of

packaging. Applicant respectfully requests that the rejections based on 35 USC §112 be withdrawn in light of the amendments and supporting Declarations.

Claim Rejections – 35 USC § 102

The Examiner has rejected claims 1, 5-6, 8-9, 11, and 18 under 35 U.S.C. § 102(e) as anticipated by Wenzel et al., U.S. Patent No. 5,837,383.

It is the Examiner's position that the product formed by coating as Wenzel et al. is the same product as claimed herein, on the basis that the individual layers are composed of the same materials. The applicant respectfully argues that these are not the same materials. First, because the product made in accordance with the Wenzel patent is recyclable, it clearly has physical properties that cause the material to react differently to moisture. It is known in the art that polyethylene and wax-coated materials are problematic to the repulping process unless extensive screening and cleaning equipment is used (Column 11, lines 11-13). In fact, Wenzel's emphasis in recyclability teaches away from the present invention, since Wenzel teaches water soluble coatings whereas the present claims call for water-insoluble solid coatings. See, Tec Air Inc. v. Denso Manufacturing Michigan Inc., 52 USPQ2d 1294 (Fed. Cir. 1999), citing In re Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994)("[a] reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out by the applicant . . . [or] it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant.") and citing In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)(finding no suggestion to modify a prior art device where the modification would render

the device inoperable for its intended purpose). Further, moisture can pass through the Wenzel laminate at a rate faster than that obtained with applicant's laminate. Compare the Declaration of Van Abel, ¶ 9 and the Declaration of Mueller, ¶ 11 to Wenzel, column 9, Table I.

Second, the strength properties of applicant's laminate are different than that of a coated product. An extruded film, such as that used in the present invention, inherently has different strength properties in the machine and cross-machine direction because of the way it was formed. See the Declaration of Mueller, ¶ 5. This is analogous to a comparison of hard candy and cotton candy. They can both be made of the same ingredients, but have different properties due to the way they were manufactured. An example of one film used by applicant is AET FILMS, AQS Transparent OPP Film that is a coextruded, biaxially oriented polypropylene film. See the Declaration of Mueller, ¶ 6. The film has a greater tensile strength in the cross-machine direction than in the machine direction. Id. Conversely, paper has a greater tensile strength in the machine direction than cross-machine direction. By laminating these two materials together, the tensile strength in each direction is enhanced. Id. This positively affects the burst strength of the material. Id. Of course, this example is not meant to limit the scope of applicant's invention, it is only meant to show how different an extruded film is from that of a coating.

The Examiner has also rejected claims 1, 5-6, 8, 11, 15, 16 and 18-21 under 35 U.S.C. § 102(e) as anticipated by Wittosch et al., U.S. Patent No. 5,989,724. This rejection should be withdrawn for the same reasons as set forth in the above paragraphs with respect to the Wenzel reference.

In light of the argument and amendments to claims 1 and 18, applicant requests that the §102 rejections be withdrawn. Neither Wenzel nor Wittosch disclose a ream wrap with an extruded film component, or a water vapor transmission rate of less than 0.5 g/100 in²/24 hours, measured at 90 percent humidity, 100 degrees Fahrenheit. Thus, one or more claimed elements are missing from the cited references.

Claim Rejections – 35 USC § 103

The Examiner has also rejected claims 10, 12, 15-16 and 19-21 under 35 U.S.C. § 103(a) as unpatentable over Wenzel as applied above, and further in view of the Wittosch et al. patent, U.S. Patent No. 5,989,724. This rejection should be withdrawn for the same reasons as set forth in the above paragraphs with respect to the Wenzel reference.

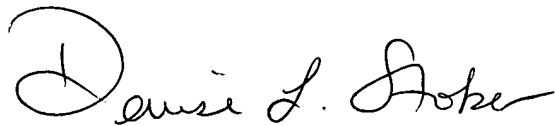
The Examiner then further rejected claims 6, 9, 10 and 12 under 35 U.S.C. § 103(a) as unpatentable over Wittosch as applied to claims 1, 5, 8, 11, 15, 16 and 18-21. Again, each of the arguments set forth above with respect to the base claim, in comparison with the amended claim 1, apply here equally well. The Examiner again states that the composite material of Wittosch is the same as the instantly claimed composite material, and discloses that it is well known to use polyethylene and wax to produce conventional ream wraps. However, Applicants point out that the Wittosch reference merely states that polyethylene films laminated to paper are widely used in the packaging industry (column 1, lines 27-29). One must read further to see what prior art is cited in the Wittosch patent. The “conventional ream wraps” are defined in Wittosch as a “multi-ply product having a center ply of polyethylene in between two plies of paper.” As explained in the applicant’s specification, the Wittosch product is different from Applicant’s in

that it processes like paper and does not provide the gloss or ink-holdout of film, see specification page 2, lines 8-11. Accordingly, for that reason in addition to the reasons set forth above, claims 6, 9, 10 and 12 are allowable. These rejections may now be withdrawn.

Conclusion

Therefore it appears that this application is now in allowable form and allowance of these claims at an early date is earnestly solicited. Should the Examiner disagree or believe that, for any other reason, direct contact with the attorney for the Applicant would advance the prosecution of this case, the Examiner is invited to telephone the undersigned at the number given below.

Respectfully submitted,



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